

# Edexcel Biology IGCSE

## 5.a - Food Production

### Flashcards

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# How can greenhouses and polythene tunnels increase crop yield?



How can greenhouses and polythene tunnels increase crop yield?

The conditions are kept at the optimum for growth, including the use of artificial lighting and trapping heat from the sun.



How does increased temperature increase the crop yield?



# How does increased temperature increase the crop yield?

- Enzymes work more efficiently at higher temperatures and reaction rates are faster
- Enzymes are involved in key growth processes and photosynthesis



How does a continuous supply of carbon dioxide increase the crop yield?



# How does a continuous supply of carbon dioxide increase the crop yield?

- $\text{CO}_2$  is needed for photosynthesis which is needed to provide energy for growth
- Without a constant supply of enough  $\text{CO}_2$ , it may become a limiting factor and so the rate of photosynthesis is slower



# How do fertilisers increase crop yield?





# How do fertilisers increase crop yield?

Fertilisers provide nutrients for the plant which are needed for growth to make the crops large and give a plentiful yield.



# State 2 methods of pest control



State 2 methods of pest control

Biological control

Pesticides



# What is biological control?



## What is biological control?

It is a method of controlling plant pests by deliberately introducing organisms that feed on the pests to decrease the number of them.



Give 2 advantages of pesticides



## Give 2 advantages of pesticides

- They are cheap
- They are easy to use



Give 3 disadvantages of pesticides





## Give 3 disadvantages of pesticides

- They are not specific and so can kill other insects that are not pests
- They can contaminate water sources
- They have to be applied more than once



# Give 3 uses of yeast



# Give 3 uses of yeast

- Fermentation of alcohol
- Baking (causes bread to rise)
- Making biofuels



# How does yeast cause bread to rise?



# How does yeast cause bread to rise?

The yeast breaks down the sugars in the bread in respiration and produces carbon dioxide which causes the bread to rise.



Describe how yoghurt is made from milk



## Describe how yoghurt is made from milk

- Bacteria (*Lactobacillus*) is used to break the lactose in milk down into lactic acid
- Lactic acid lowers the pH of the milk which causes proteins to denature and makes the milk turn into yoghurt



# What is a fermenter used for?





What is a fermenter used for?

To produce large cultures of  
microorganisms



State 5 things that need to be controlled  
in an industrial fermenter

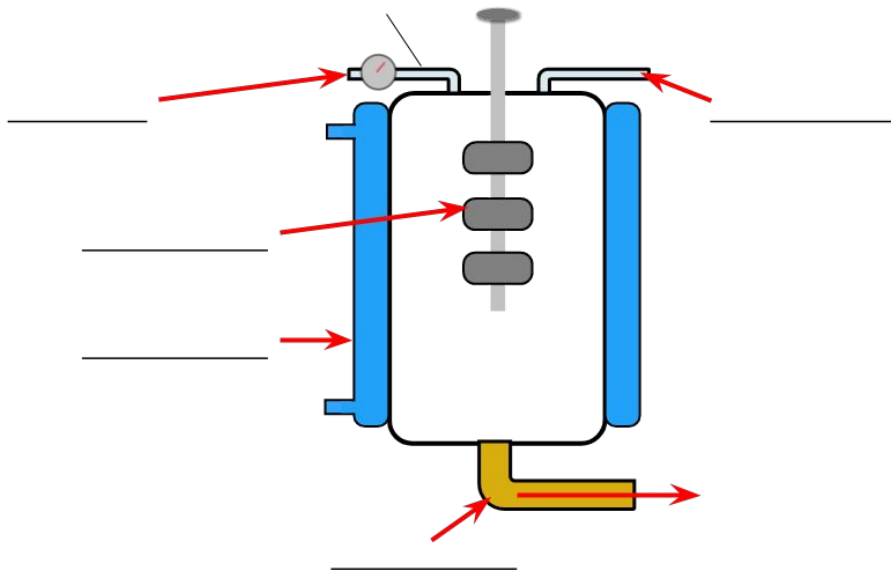


# State 5 things that need to be controlled in an industrial fermenter

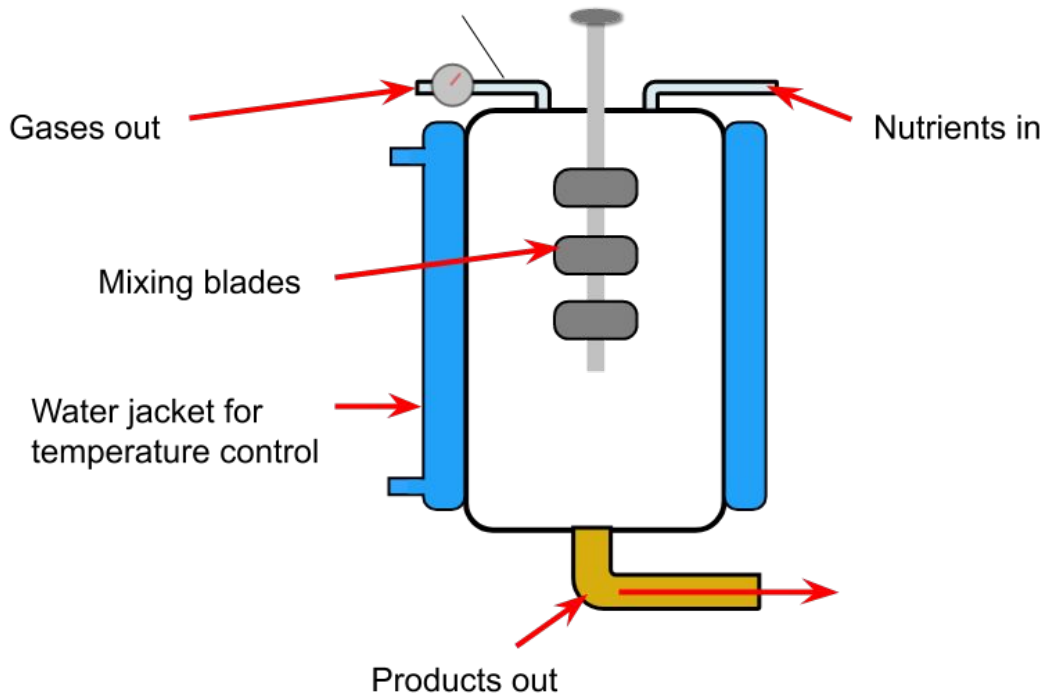
- Temperature
- pH
- Nutrient levels
- Oxygen levels
- Contamination



# Label this diagram of a fermenter



# Label this diagram of a fermenter



Give 6 methods used in fish farming to increase yield (**Higher**)



## Give 6 methods used in fish farming to increase yield (Higher)

- Ensuring good water quality
- Controlling predation
- Controlling disease
- Clearing waste
- Managing feeding
- Selective breeding



How is water quality maintained in fishing areas? (Higher)





# How is water quality maintained in fishing areas?

(Higher)

- Waste removed
- Pathogens killed



What is the difference between intraspecific and interspecific predation, in terms of fish? (Higher)



What is the difference between intraspecific and interspecific predation, in terms of fish? **(Higher)**

Interspecific predation is where other species eat the fish and intraspecific predation is where the fish eat one another.

